ANTHEM™

THE KEY TO HIGH END AUDIO-VIDEO™

MCA 20/30/50 AMPLIFIERS

OPERATING MANUAL

DEAR VALUED CUSTOMER,

We at Sonic Frontiers International hope you will derive many years of listening pleasure from your new multi-channel Anthem MCA Series Amplifier. This Operating Manual contains important information regarding the operation and care of your MCA Series Amplifier. Be sure to read this manual carefully and follow these instructions in order to keep your unit performing and sounding its best. Please contact Sonic Frontiers if you have any questions, a Customer Service Representative will be pleased to assist you.

HAPPY LISTENING!

READ THIS SECTION CAREFULLY BEFORE PROCEEDING!

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of uninsulated "dangerous voltage" within the products enclosure, of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the amplifier.

Before operating your MCA Series Amplifier, read and follow all instructions and warnings! Retain these instructions for future reference.

CAUTION!

To protect against electrical shock and risk of fire do not expose to rain or moisture and do not use amplifier near sinks, showers, bathtubs, swimming pools, saunas, in wet basements or near any source of water. Always unplug before cleaning, and use a damp soft cloth.

To protect against electrical shock do not remove the amplifier cover. There are no user serviceable parts inside. If the unit has been dropped, damaged, exposed to water or does not operate normally, it must be serviced. Refer any servicing to your Authorized Anthem Dealer, who will return the product to Sonic Frontiers International.

CAUTION!

This amplifier has a polarized electrical plug. To protect against electrical shock do not use with any receptacle, extension cord or any other outlet unless the metal arms of the plug can be fully inserted so that they are not exposed.

Use only with the AC voltage rating indicated on the rear panel. Do not overload outlets or extension cords, as this can result in a risk of fire or electrical shock. Install so that the power cord will not get damaged over time. Unplug the amplifier when not using it for an extended period of time to prevent damage due to lightning and power surges.

To protect against risk of fire and electric shock, do not allow any liquids or objects to penetrate the amplifier enclosure.

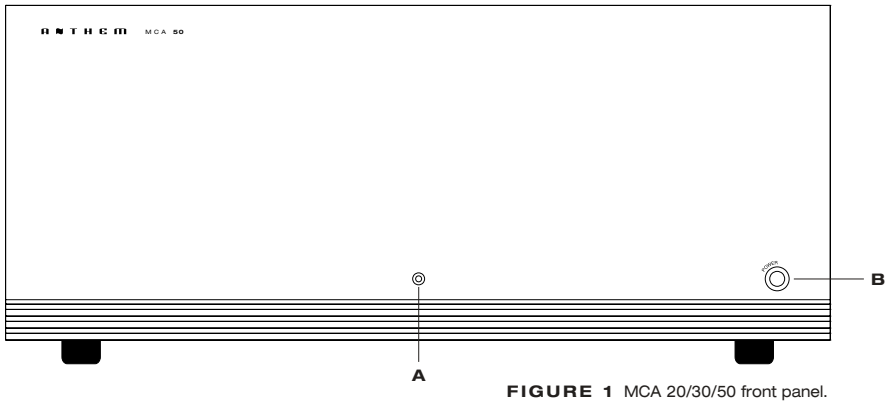

FIGURE 1 MCA 20/30/50 front panel.

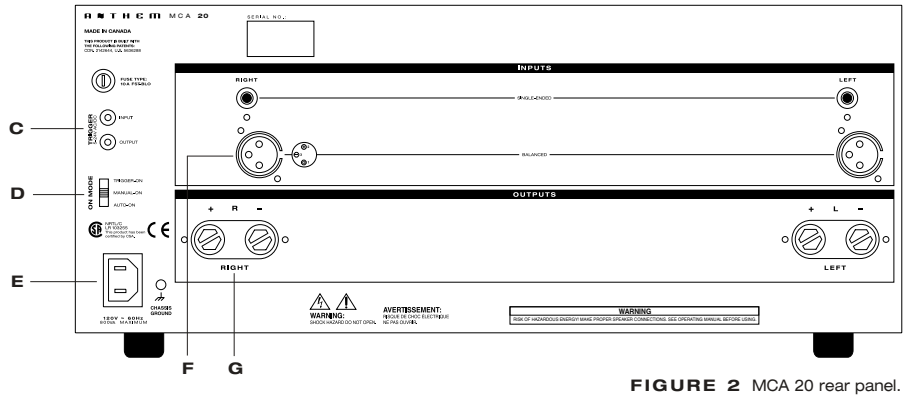

FIGURE 2 MCA 20 rear panel.

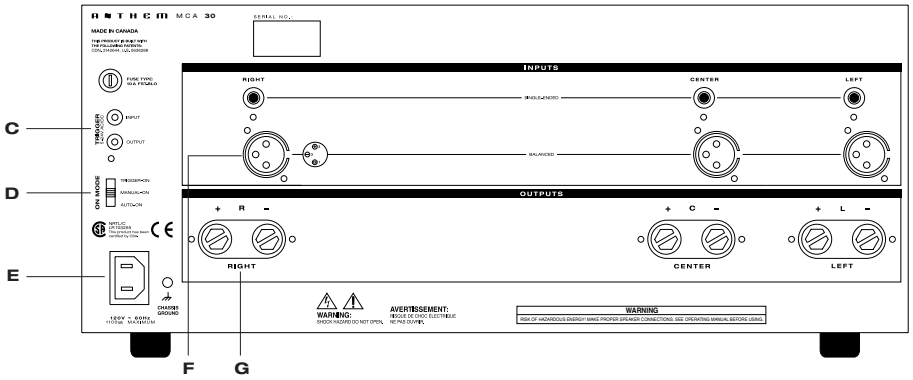

FIGURE 3 MCA 30 rear panel.

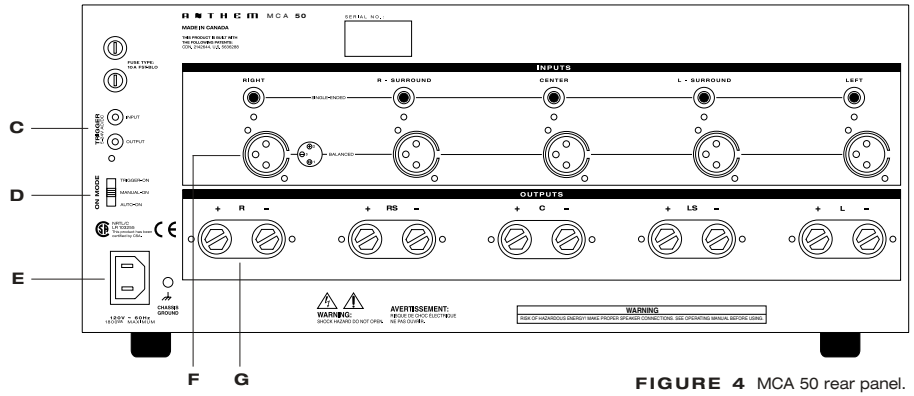

FIGURE 4 MCA 50 rear panel.

CONTROL FUNCTIONS (SEE FIGURE 1)

A 2-COLOR LED
In MANUAL mode, the LED is lit "green" when the amplifier is "ON", receiving power from the power supply.

In AUTO or TRIGGER mode, the LED will be lit "red" until the amplifier receives a music signal (auto) or a trigger voltage (trigger), at which point the LED will turn "green".

B POWER BUTTON
When in the ON position (button depressed), AC voltage is applied and the multi-channel circuitry receives high voltage power from the DC power supplies. When in the OFF position (not depressed), the amp is not receiving AC power and is not operational.

CONNECTION FUNCTIONS (SEE FIGURES 2 TO 4)

C TRIGGERS (INPUT & OUTPUT)
The 3.5mm (.125") mini-jack INPUT receives a 5-24V AC/DC trigger signal from an upstream component (preamplifier, surround sound processor such as the Anthem AVM 20, or system controller), and delivers the same trigger signal through the OUTPUT to other system components.

D ON MODES
With this three-way slide switch, you may select the way in which your amplifier is turned ON and/or OFF:

- TRIGGER: (Power button must be depressed for this mode)
  This feature allows your amplifier to be turned on or off remotely via the Trigger described above (C).

- MANUAL:
  When in this position, the amplifier is turned ON/OFF via the power button on the front panel (B).

- AUTO: (Power button must be depressed for this mode)
  This innovative feature eliminates the need for a manually operated power button. AUTO ON turns the amplifier on whenever there is an input signal on any one of the channels. If no input signal is sensed after a period of time, the amplifier switches off automatically.

E DETACHABLE AC POWER CORD SOCKET
Plug the Detachable Power Cord into this socket. The MCA Series Amplifier is factory built for the correct operating voltage for the area in which it is sold (see shipping box for voltage setting).

F SINGLE-ENDED (RCA) INPUT
Connect the outputs from your preamp or surround sound preamp to the Right, R-Surround, Center, L-Surround, and Left inputs (number of channels depends on MCA model).

G BALANCED (XLR) INPUT
Balanced connection provides the highest transmission quality, especially over long cable lengths – if your preamp or surround sound preamp has XLR outputs, use these inputs instead of the single-ended (RCA) inputs.

H SPEAKER CONNECTION POSTS
Each 5-way binding post accepts a connection from one speaker. The positive/red (+) connection on the speaker is to be made to the positive/red (+) binding post on the same amplifier channel. As well, the negative/black (–) connection on the speaker is to be made to the negative/black (–) binding post on the appropriate amplifier channel.

Be careful not to overtighten the binding posts.

OPERATION

PLACEMENT FOR PROPER VENTILATION

The MCA Series Amplifier requires a minimum of 12" (30cm) of unobstructed air space above the top cover. Make sure that the ventilation slots on the top and bottom remain unobstructed by any object. Do not stack any other component on top of the MCA Series Amplifier or block the ventilation slots in any way. Also, be sure that the amplifier is placed on a secure, hard and level surface, **NOT** on carpet.

In the event of overheating, your MCA Series Amplifier is equipped with a thermal shut off feature. The amplifier will remain off until the temperature falls below the shut off threshold. Once this condition is met, the amplifier will reset itself and it can be powered on again.

OPERATION

Before plugging in the MCA Series Amplifier, check to see that it is configured for the correct AC line voltage for country of use. The operating AC line voltage is indicated on the side of the shipping box and on the rear panel. If the amplifier is set incorrectly for the country in which it is to be operated, contact the dealer or distributor in your area.

Connect loudspeakers to the appropriate post as described in the Speaker Connection Posts section above.

The remaining input signal connection is made with connectors from a suitable Preamp or SSP such as the Anthem AVM 20.

Connect the preamp/SSP outputs to the appropriate MCA Series Amplifier inputs (F in figures 2 to 4) for each channel.

Select an appropriate ON MODE for your MCA Series Amplifier. If TRIGGER mode is selected, connect a standard 3.5mm Mini Plug trigger cable between your MCA Series Amplifier and the upstream control component, such as the Anthem AVM 20.

Connect the Detachable Power Cord to the AC Power Cord Socket (E in figures 2 to 4). Plug your amplifier into the AC power source.

After you ensure your preamp or SSP has the volume turned down or muted, you can power up your MCA Series Amplifier, which is now ready for operation.

BREAK-IN TIME

As with all audio electronic products, the ultimate sonic character of the MCA Series Amplifier will not be realized until the unit receives a minimum of approximately 70 hours of signal break-in time (i.e. the amplifier is on and outputting a signal).

TROUBLESHOOTING

If at any time the MCA Series Amplifier fails to work properly, consult this checklist:

1. Check that the AC Detachable Power Cord is plugged into the Detachable Power Cord Socket (E in figures 2 to 4) and is connected to a live source of AC power. For instance, if using a power bar, check that the bar is turned on.

2. Ensure that all Input and Output connections are secure for a proper electrical contact.

3. Ensure that the amplifier is configured for the appropriate ON MODE in your system setup (D in figures 2 to 4).

4. Check the internal fuse(s).

If a problem still persists, please contact your authorized Anthem Dealer directly.

PACKING MATERIALS

Please retain all of the packing material and shipping boxes for your MCA Series Amplifier. They are custom designed to prevent shipping damage from occurring. Sonic Frontiers Int'l will accept no responsibility for any damage occurring to an MCA Series Amplifier that is shipped in packing material other than the original Sonic Frontiers packing material.

TECHNICAL SPECIFICATIONS

INPUTS
MCA 20 2 Single-Ended, 2 Balanced, 1 Relay Trigger (3.5 mm Mono Jack)
MCA 30 3 Single-Ended, 3 Balanced, 1 Relay Trigger (3.5 mm Mono Jack)
MCA 50 5 Single-Ended, 5 Balanced, 1 Relay Trigger (3.5 mm Mono Jack)

OUTPUTS
MCA 20 2 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5 mm Mono Jack)
MCA 30 3 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5 mm Mono Jack)
MCA 50 5 Pairs Speaker Binding Posts, 1 Relay Trigger (3.5 mm Mono Jack)

SWITCHES
Front Panel: Power On/Off Rear Panel: 3 On/Off Modes (Trigger, Manual, Auto)

POWER OUTPUT
(Continuous, RMS, 20 Hz - 20 kHz, <1.0% THD, AC line voltage held constant at full load)

Impedance:	8 Ω		4 Ω		2 Ω	
# of Channels Driven:	1	All	1	All	1	All
MCA 20	225 W	200 W	370 W	300 W	535 W	410 W
MCA 30	225 W	180 W	375 W	265 W	550 W	340 W
MCA 50	225 W	180 W	370 W	265 W	535 W	340 W *

* *Special Test Conditions Required*

HEADROOM
1.45 dB (8 Ω); 2.3 dB (4 Ω)

POWER BANDWIDTH
10 Hz - 80 kHz (200 W @ 8 Ω)

FREQUENCY RESPONSE
20 Hz - 20 kHz, (-0.15 dB); 5 Hz - 100 kHz, (-2 dB)

THD&N
0.0015% @ 1 kHz; 0.03% @ 20 kHz (100 W into 8 Ω)

INPUT SENSITIVITY
1.5 VRMS for 225 W into 8 Ω

INPUT IMPEDANCE
10 kΩ (RCA); 15 kΩ (XLR)

DAMPING FACTOR
130 @ 1 kHz (ref. 8 Ω)

S/N RATIO
120 dBW, A-weighted (ref. 225 W)

CHANNEL SEPARATION
>65 dB (100 Hz - 10 kHz)

VOLTAGE GAIN
29 dB

SLEW RATE
20 V/µs

POWER REQUIREMENTS
MCA 20 800 VA @ maximum power output (8 Ω load)
MCA 30 1100 VA @ maximum power output (8 Ω load)
MCA 50 1800 VA @ maximum power output (8 Ω load)

DIMENSIONS
MCA 20 17 ¼" (43.8 cm) Wide x 7" (17.8 cm) High x 12 ¼" (31 cm) Deep
MCA 30 17 ¼" (43.8 cm) Wide x 7" (17.8 cm) High x 12 ¼" (31 cm) Deep
MCA 50 17 ¼" (43.8 cm) Wide x 7" (17.8 cm) High x 17 ½" (44.5 cm) Deep

NET WEIGHT
MCA 20 35 lbs (16 kg)
MCA 30 41 lbs (18.5 kg)
MCA 50 61 lbs (27.5 kg)

NOTE: Measurements were performed with an Audio Precision System Two @ 120 VAC

WARRANTY (USA & CANADA)

Sonic Frontiers International (SFI) warrants to the original purchaser that each Anthem MCA Series Amplifier is free from defects in workmanship and materials, during normal use and service, for a period of five (5) years from the date of sale. To receive this warranty, the original purchaser must complete the enclosed Warranty Registration Card and mail it to SFI within thirty (30) days from the date of purchase. During the warranty period, SFI will repair or replace any defective components free of charge. Warranty is not transferable.

Display products sold by an Authorized Sonic Frontiers / Anthem Dealer are covered under the same warranty terms, except that the warranty period commences from the date of the dealer invoice, not the purchaser's invoice, and cosmetic flaws, if there are any, are excluded.

If a problem or defect is discovered in your Anthem MCA Series Amplifier, please contact your Authorized Anthem Dealer. It is the Dealer's responsibility to determine the nature of the problem and arrange for the appropriate replacement parts, or the return of the MCA Series Amplifier to SFI. A Return Authorization (RA) number must be obtained in advance from SFI Tech Support before any product can be returned to SFI for any reason:

Telephone:	905-828-4575 ext. 240
	(9AM - 5:30PM EST, voice mail 24 hrs.)
Fax:	905-828-4585
E-mail:	sfitech@sonicfrontiers.com

The RA Number must be clearly visible on the outside of the shipping carton for SFI to accept the return. Product shipped to SFI without a RA Number will be refused and returned to the sender, freight collect. Product shipped to SFI for repair must have shipping and insurance prepaid by the original purchaser, packaged in the original packing carton and material and should be accompanied by a written description of the defect. To receive service under warranty, an accompanying copy of the original sales receipt is required. Product repaired under warranty will be returned shipping and insurance prepaid by SFI (within North America only). All other repairs are subject to charges for labor, parts, return shipping, and insurance. SFI will accept no responsibility for any damage occurring to a MCA Series Amplifier that is shipped in any type of packing carton and material other than the original packing carton and material.

This warranty is void if the product has been operated or handled other than in accordance with the instructions in this Operating Manual or otherwise abused, misused, damaged by accident or neglected in transport, tampered with, modified, or repaired by anyone other than SFI or an authorized SFI service center. Regular maintenance is not covered by this warranty. If inspection by SFI discloses that the repair required to the product is not covered by this warranty, regular repair charges shall apply.

DISCLAIMER OF LIABILITY

Under no circumstances does Sonic Frontiers International assume liability or responsibility for injury or damages sustained in the use or operation of this product, or for damages to any other products connected to it.

In no event shall SFI, its agents, representatives, or employees, be responsible for any incidental or consequential damages. Some jurisdictions do not allow limitations of incidental or consequential damages, so this exclusion may not apply to you.

SFI reserves the right to make design changes or improvements to this product without any obligation to revise prior versions. All specifications are subject to change without notice.

On the expiration of the warranty period all liability of SFI in connection with the product shall terminate.

This warranty constitutes the only warranty applicable to products sold by SFI. No other warranty or condition, statutory or otherwise, expressed or implied, shall be imposed upon SFI, nor shall any representation made by any person, including a representation by a representative or agent of SFI, be effective to extend the warranty coverage provided herein.

WARRANTY (INTERNATIONAL)

Outside of Canada and USA, warranty coverage terms are set and maintained by the Authorized Sonic Frontiers International / Anthem Distributor, not SFI. Exact terms and conditions may vary. Sonic Frontiers International (SFI) will provide warranty replacement parts to the original purchaser of the product, via the distributor, for a period of five (5) years, via surface mail. Additional courier freight charges will apply.

FREQUENTLY ASKED WARRANTY QUESTIONS

Is there a Warranty on TRADE-INS?

The balance of the warranty can be transferred on used product only if the product is traded in at an Authorized Sonic Frontiers / Anthem Dealer, who may resell the product with the remaining warranty if it is cosmetically acceptable, in perfect working condition, and has not been internally or externally altered in any way. The Dealer must call SFI to provide the serial number of such a product so that the warranty may be registered to the new owner.

What is the USED EQUIPMENT WARRANTY?

The standard SFI warranty is not valid for used product purchased from a non-authorized dealer or private sale. However, a 3-year warranty for used equipment is available for purchase from SFI. For further details, please visit www.sonicfrontiers.com or contact SFI Tech Support.

ANTHEM™

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Sonic Frontiers can be reached 9:00 am to 5:00 pm (E.S.T.) or 24 hours a day by facsimile

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